Final Design of the SNS Linac

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Los Alamos National Laboratory is responsible for the design of the linac for the Spallation Neutron Source (SNS) accelerator complex. Its design has recently been finalized. It is comprised of both normal- and super-conducting RF (SRF) structures. The normal-conducting linac section up to 185 MeV, consists of a 2.5-MeV RFQ, a Medium Energy Beam Transfer (MEBT) line, a 402.5-MHz DTL, followed by a 805-MHz CCL. The SRF structure accelerates the beam from a nominal energy of 185 MeV to 1000 MeV. The SRF section consists of two, a medium beta ($\beta_g = 0.61$), and a high beta ($\beta_g = 0.81$) sections. In this paper, we discuss different aspects of the final design including expected beam performance.

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